## **RAW SEQUENCE LISTING**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:	10/081,02 114
Source:	JF(1) 0
Date Processed by STIC:	8-20-05

# ENTERED



IFW16

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/089,027A

Input Set: A:\NEB-166-PUS.APP.txt

Output Set: N:\CRF4\08202005\J089027A.raw

ANT: JACK, WILLIAM E.

R ANDREW

3 <110> APPLICANT: JACK, WILLIAM E. GARDNER, ANDREW 5 BUZBY, PHILIP R. 6 DiMEO, JAMES J. 7 NEW ENGLAND BIOLABS, INC. NEN LIFE SCIENCE PRODUCTS, INC. 10 <120> TITLE OF INVENTION: INCORPORATION OF MODIFIED NUCLEOTIDES BY ARCHAEON DNA POLYMERASES AND RELATED METHODS 13 <130> FILE REFERENCE: NEB-166-PUS 15 <140> CURRENT APPLICATION NUMBER: 10/089,027A 16 <141> CURRENT FILING DATE: 2002-03-26 18 <150> PRIOR APPLICATION NUMBER: PCT/US00/26900 19 <151> PRIOR FILING DATE: 2000-09-29 21 <150> PRIOR APPLICATION NUMBER: 60/157,204 22 <151> PRIOR FILING DATE: 1999-09-30 24 <160> NUMBER OF SEQ ID NOS: 33 26 <170> SOFTWARE: PatentIn Ver. 2.0 28 <210> SEQ ID NO: 1 29 <211> LENGTH: 36 30 <212> TYPE: DNA

oligonucleotide

49 <400> SEQUENCE: 2

50 ggtggcagca gccaactcag cttcct 26

52 <210> SEQ ID NO: 3

53 <211> LENGTH: 24

54 <212> TYPE: DNA

55 <213> ORGANISM: Artificial Sequence

57 <220> FEATURE:

58 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic

59 oligonucleotide

61 <400> SEQUENCE: 3

RAW SEQUENCE LISTING DATE: 08/20/2005
PATENT APPLICATION: US/10/089,027A TIME: 11:08:31

Input Set : A:\NEB-166-PUS.APP.txt

Output Set: N:\CRF4\08202005\J089027A.raw

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76	gggagtttaa	aatagaactt	gaccctcatt	ttcagcccta	tatatatgct	cttctcaaag	420
77	atgactccgc	tattgaggag	ataaaggcaa	taaagggcga	gagacatgga	aaaactgtga	480
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80	cagctgtggt	tgacatttac	gaatatgaca	taccctttgc	caagcgttat	ctcatagaca	660
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83	atgaagaaga	ggccagagta	atcacatgga	aaaatatcga	tttgccgtat	gtcgatgttg	840
84	tgtccaatga	aagagaaatg	ataaagcgtt	ttgttcaagt	tgttaaagaa	aaagaccccg	900
85	atgtgataat	aacttacaat	ggggacaatt	ttgatttgcc	gtatctcata	aaacgggcag	960
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						cggcgcttaa	
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						gcaatgaggc	
						atgctcgatt	
						tggttaccaa	
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						a gtcaaagcco	
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						gaagttact	
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	. accededate	· aaaagagaa	Junguncyy	. aaaccygaac		- cccagaacge	. 2500

## RAW SEQUENCE LISTING DATE: 08/20/2005 PATENT APPLICATION: US/10/089,027A TIME: 11:08:31

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Output Set: N:\CRF4\08202005\J089027A.raw

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115	atgaggaccc	taatgttctt	gagagcatga	aaaatgttgc	agaaaaattc	tttggcaagg	2760
116	ttagagttga	cagaaattgc	gtaagtatat	caaagaagat	ggcatactta	gttatgaaat	2820
117	gcctctgtgg	agcattagcc	gaaaacaaga	gaattccttc	tgttatactc	acctctcccg	2880
118	aaccggtacg	gtggtcattt	ttagaggcgt	attttacagg	cgatggagat	atacatccat	2940
119	caaaaaggtt	taggctctca	acaaaaagcg	agctccttgc	aaatcagctt	gtgttcttgc	3000
120	tgaactcttt	gggaatatcc	tctgtaaaga	taggctttga	cagtggggtc	tatagagtgt	3060
121	atataaatga	agacctgcaa	tttccacaaa	cgtctaggga	gaaaaacaca	tactactcta	3120
122	acttaattcc	caaagagatc	cttagggacg	tgtttggaaa	agagttccaa	aagaacatga	3180
123	cgttcaagaa	atttaaagag	cttgttgact	ctggaaaact	taacagggag	aaagccaagc	3240
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125	aggactatga	agggtatgtc	tatgacctaa	gcgttgagga	taacgagaac	tttcttgttg	3360
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128	tgacgataag	agaaatagag	gaaaagttcg	gctttaaggt	tctttatgcg	gacagtgtct	3540
129	caggagaaag	tgagatcata	ataaggcaaa	acggaaagat	tagatttgtg	aaaataaagg	3600
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131	ttgaagcact	aactctggac	gatgacggaa	agcttgtctg	gaagcccgtc	ccctacgtga	3720
132	tgaggcacag	agcgaataaa	agaatgttcc	gcatctggct	gaccaacagc	tggtatatag	3780
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134	aaaaaatcgg	ggaaagacta	aaggaagtaa	agccttttga	attaggcaaa	gcagtaaaat	3900
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		gctaacaaac					
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		aacctactca					
		tttaatcgag					
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		acttgaaaag					
		tggccctcat					
		cacaataata					
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		agttttgccg					
		gtatcaaagc					
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161	tatgtggttt	tcattcacta	ttaagtagtc	cgccaaagcc	ataacgcttc	caattccaaa	5520

#### RAW SEQUENCE LISTING DATE: 08/20/2005 PATENT APPLICATION: US/10/089,027A TIME: 11:08:31

Input Set : A:\NEB-166-PUS.APP.txt

Output Set: N:\CRF4\08202005\J089027A.raw

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162 cttgagetet ttecagtete tggeeteaaa tteaeteeat gtttttggat egtegettet 5580
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164 tatetettee tetggaaaeg catetttaaa egtetgaatt teatetagag aceteaetee 5700
165 gtcgattata actgccttgt acttctttag tagttctttt acctttggga tcgttaattt 5760
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167 gggagttctt gggatcc
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170 <211> LENGTH: 15
171 <212> TYPE: PRT
172 <213> ORGANISM: Thermococcus litoralis
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179 <210> SEQ ID NO: 6
180 <211> LENGTH: 15
181 <212> TYPE: PRT
182 <213> ORGANISM: Pyrococcus Sp. (GB-D)
184 <400> SEQUENCE: 6
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189 <210> SEQ ID NO:
190 <211> LENGTH: 15
191 <212> TYPE: PRT
192 <213> ORGANISM: Thermococcus sp.
194 <400> SEQUENCE: 7
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201 <212> TYPE: PRT
202 <213> ORGANISM: Pyrococcus furiosus
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212 <213> ORGANISM: Thermococcus fumicolans
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220 <211> LENGTH: 15
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222 <213> ORGANISM: Thermococcus gorgonarius
224 <400> SEQUENCE: 10
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## RAW SEQUENCE LISTING DATE: 08/20/2005 PATENT APPLICATION: US/10/089,027A TIME: 11:08:31

Input Set : A:\NEB-166-PUS.APP.txt
Output Set: N:\CRF4\08202005\J089027A.raw

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232 <213> ORGANISM: Thermococcus sp. (TY)
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                                         10
239 <210> SEQ ID NO: 12
240 <211> LENGTH: 15
241 <212> TYPE: PRT
242 <213> ORGANISM: Pyrococcus abyssi
244 <400> SEQUENCE: 12
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246 1
249 <210> SEQ ID NO: 13
250 <211> LENGTH: 15
251 <212> TYPE: PRT
252 <213> ORGANISM: Pyrococcus glycovaorans
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260 <211> LENGTH: 15
261 <212> TYPE: PRT
262 <213> ORGANISM: Pyrococcus horikoshii
264 <400> SEQUENCE: 14
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269 <210> SEQ ID NO: 15
270 <211> LENGTH: 15
271 <212> TYPE: PRT
272 <213> ORGANISM: Pyrococcus sp. (GE23)
274 <400> SEQUENCE: 15
275 Ala Ile Lys Ile Leu Ala Asn Ser Tyr Tyr Gly Tyr Tyr Gly Tyr
279 <210> SEQ ID NO: 16
280 <211> LENGTH: 15
281 <212> TYPE: PRT
282 <213> ORGANISM: Pyrococcus Sp. (KOD1)
284 <400> SEQUENCE: 16
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289 <210> SEQ ID NO: 17
290 <211> LENGTH: 15
291 <212> TYPE: PRT
292 <213> ORGANISM: Pyrococcus woesei
294 <400> SEQUENCE: 17
295 Ala Ile Lys Leu Leu Ala Asn Ser Phe Tyr Gly Tyr Tyr Gly Tyr
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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 08/20/2005 PATENT APPLICATION: US/10/089,027A TIME: 11:08:32

Input Set : A:\NEB-166-PUS.APP.txt

Output Set: N:\CRF4\08202005\J089027A.raw

#### Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:31; N Pos. 2,3,11,12,14,46,77,84,128,152 Seq#:32; N Pos. 2,3,6,21,468,532,535,560,577

Seq#:33; N Pos. 8,9,11,20,26,27,31,35,40,46,60,68,75,119,124,132,139,143 Seq#:33; N Pos. 173,174,194,196,210,213,220,246,252,297,326,329,342,349,365

Seg#:33; N Pos. 368,378,419,428,435,454,502,537,551,571,597

#### VERIFICATION SUMMARY

DATE: 08/20/2005 TIME: 11:08:32 PATENT APPLICATION: US/10/089,027A

Input Set : A:\NEB-166-PUS.APP.txt

Output Set: N:\CRF4\08202005\J089027A.raw

L:556 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0

M:341 Repeated in SeqNo=31

L:626 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0

M:341 Repeated in SeqNo=32

L:861 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:0

M:341 Repeated in SeqNo=33